



**Comptroller General
of the United States**

Washington, D.C. 20548

Decision

Matter of: Northern Technologies, Inc.

File: B-239173

Date: July 24, 1990

Jeff O'Bleness, for the protester.
Mary Munger, for Transtector Systems, Inc., an interested party.
Capt. Benejamin Collum, Esq., and Col. Herman A. Peguese, Department of the Air Force, for the agency.
Amy M. Shimamura, Esq., and Christine S. Melody, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

Where protester failed to provide test data showing that its offered product will meet a specification requirement, the contracting agency properly rejected protester's product as nonresponsive.

DECISION

Northern Technologies, Inc. (NTI) protests the issuance by the Department of the Air Force of delivery order No. F4168590F02048 to Transtector Systems, Inc., for the purchase of a transient surge protector for Laughlin Air Force Base, Texas, under General Services Administration (GSA) Federal Supply Schedule (FSS) contract No. GS-00F-06996. The surge protector is required to protect vital electronic equipment from the damaging effects of short and long electrical power surges, or "transients," that the base is experiencing in its power lines. NTI basically contends that the Air Force improperly rejected its surge suppressor; that the 1 x 1000 microsecond test required by the agency to demonstrate compliance with the technical requirements of the solicitation is not a recognized industry standard; and that the price Transtector charged the agency differed from the price listed for the awardee's product in the FSS.

We deny the protest.

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On March 24, 1990, the Air Force orally issued request for quotations (RFQ) No. 90RA004 to NTI, Transtector and other suppliers listed on GSA schedules for surge protectors. The specifications, which were read to vendors over the telephone, required that offered products respond to surges in less than 5 nanoseconds^{1/} and have the capability of suppressing a maximum of 1 million watts of voltage per surge for 1,000 microseconds (long transients).^{2/} While the specifications did not state that the procurement was being conducted on a "brand-name or equal" basis, the specifications cited Transtector's Model No. ACP5000-120WXW (ACP5000), thereby suggesting that offered products must meet the performance requirements of the ACP5000.

Only Transtector and NTI submitted quotations in response to the RFQ. Transtector offered its Model No. ACP5000 at \$28,102.24; NTI offered its Model No. TCS1000c at \$10,895.

For technical evaluation purposes, NTI was asked to submit to the agency the specifications for the TCS1000c, a copy of its warranty, and oscilloscope pictures showing that the TCS1000c had successfully completed the 1 x 1000 microsecond test designed for long transients.

In response, NTI submitted the requested information including unlabeled oscilloscope pictures which purportedly compared NTI's TCS1000c with Transtector's ACP5000. The agency evaluated the pictures and concluded that NTI was comparing its TCS1000c, a 1 million watt model, with Transtector's ACP3000, a 300,000 watt model. Transtector had actually offered their ACP5000, which was cited in the RFQ, not the ACP3000. In addition, the agency's technical review of NTI's TCS1000c specifications showed that the suppressor had not been tested using the 1 x 1000 microsecond test called for by the RFQ; instead, NTI provided the results of an 8 x 20 microsecond test, which

^{1/} A nanosecond is one-billionth of a second.

^{2/} The specifications stated, "suppression power 1,000,000 watts per phase and V max (1 x 1000 microsec.)." The "1" in "1 x 1000" indicates the length of time in microseconds that it takes a power surge to reach its maximum voltage, and the "1000" is the length of time in microseconds that a surge lasts before the voltage returns to normal. According to the agency, the length of time for the surge to reach maximum voltage is not the critical factor since surge protectors react within a few nanoseconds; rather, the length of time the surge lasts is the deciding factor for the type of surge protector needed.

only proved protection capability against "short transient" power surges lasting just 20 microseconds. The technical evaluation report also noted that NTI had refused to supply the requested 1 x 1000 test data stating that the test is not recognized as an industry standard by the Institute of Electrical and Electronics Engineers (IEEE), the organization which establishes standards for the electrical and electronics industry.

Based on its technical evaluation, and in particular upon NTI's failure to provide the required 1 x 1000 microsecond test data, the Air Force rejected NTI's offer as nonresponsive. NTI was so notified on March 30. The agency issued the delivery order for Transtector's ACP5000 on March 30; the surge protector was delivered and installed by April 3.

NTI contends that the agency improperly rejected its surge protector, which it claims in fact is responsive to the RFQ's specifications. Specifically, NTI maintains that since its product can suppress 8 x 20 microsecond power surges, which it alleges are more damaging to electronic equipment than 10 x 1000 microsecond surges,^{3/} it can also suppress long surges, thereby meeting the RFQ's requirement.

The agency explains that surge protectors operate by absorbing the surge voltage before it enters the power lines of the facility. The surge voltage that is absorbed produces heat within the surge protector circuits; the longer the transient lasts, the more heat is produced. If the surge protector circuit cannot handle a long transient, the heat produced can destroy the surge protector before the surge is over. This would allow the transient to enter the power lines of the facility and damage electronic equipment. Since Laughlin is experiencing long transients at its new facility, the agency determined that the surge protector purchased must be able to absorb long transients without failing. In order to determine whether offered products

^{3/} While the RFQ required the 1 x 1000 microsecond test, the Air Force agrees that either that test or the 10 x 1000 microsecond test cited by the protester may be used to determine whether a surge protector is capable of handling long transients. The tests differ by the length of time it takes the surge to reach maximum voltage (1 microsecond v. 10 microseconds). However, the critical factor for long transient testing--the length of time the surge lasts--is the same in both tests (1,000 microseconds).

could suppress long transients the agency states that 1 x 1000 microsecond test data was required.

We conclude that the Air Force reasonably determined that a surge protector capable of suppressing long transients was required, and that the requirement for 1 x 1000 test data showing that offered products could suppress long transients was reasonable.

The record indicates that when computer equipment in a new Laughlin facility began failing, the Air Force conducted several power line tests using Transtector's "power line consultant" test instrument. This instrument records a power surge as a "short transient" whenever voltage above an established threshold is received for less than 400 microseconds, and records a surge as a "long transient" whenever voltage in excess of the threshold is received for more than 400 microseconds. During one 24-hour period, Laughlin experienced 18 power surges, 3 of which were recorded as long transients; and during another 24-hour period, the base recorded 32 power surges, 2 of which were long transients.

The record also indicates that the protester only provided test results showing that its product had successfully completed the 8 x 20 microsecond test, meaning that it could provide protection for only 20 microseconds, while the agency needed a surge protector capable of suppressing transients for 400 or more microseconds. Although NTI contends that its product can suppress long transients--i.e., surges lasting 400 or more microseconds--because it can successfully suppress short transients--surges lasting for 20 microseconds--it has not provided any evidence in support of its contention; nor has it shown that 8 x 20 microsecond surges are more powerful than 1 x 1000 or 10 x 1000 microsecond surges. Since without 1 x 1000 microsecond test data the agency had no basis upon which to determine whether NTI's TCS1000c would meet its requirement for protection against long transients, NTI's offered product was properly rejected as nonresponsive.

NTI also contends that the 1 x 1000 microsecond test should not have been required by the agency because IEEE has not approved the test as an industry standard. In addition, NTI alleges that only Transtector has the equipment necessary to perform the test.

A contracting agency's responsibility for determining its minimum needs includes determining the type and amount of testing necessary to ensure product compliance with the specifications. We will not question such a determination

unless it is unreasonable. Rezcorp, B-230260, June 14, 1988, 88-1 CPD ¶ 569. Here, we find that NTI has not shown that the agency unreasonably required the 1 x 1000 microsecond test to determine whether offered surge protectors will meet its minimum needs.

The protester's contention that the agency improperly relied on the 1 x 1000 microsecond test is based on its belief that only tests that have been approved by IEEE for use throughout the electrical and electronics industry may be required by the agency for use in determining the technical acceptability of surge protectors. In this regard, IEEE has informally advised our Office that companies are not required to obtain IEEE's approval of tests as an industry standard prior to marketing or using tests. In any event, whether the required 1 x 1000 test for long transients has been recognized as an industry standard is not the issue here; the question is whether the Air Force reasonably required the 1 x 1000 microsecond test to determine whether offered products will meet its minimum needs.


The 8 x 20 microsecond test, which NTI contends should be used since it is a recognized industry standard, can only determine whether a surge protector will suppress an electrical surge for up to 20 microseconds. The record, however, clearly indicates that the Air Force requires protection against long transients which last in excess of 400 microseconds. The protester has not shown that there is a test other than the required 1 x 1000 microsecond test that is capable of determining whether a surge protector would be effective in suppressing such long transients. Under these circumstances, the Air Force's determination to require the 1 x 1000 microsecond test was reasonable.

Contrary to NTI's contention, the record also indicates that tests for long transients have long been used by the industry, albeit in different applications, and are not unique to Transtector. In any event, even if Transtector had been the only company with equipment capable of performing the 1 x 1000 microsecond test to determine the effectiveness of surge protectors in suppressing long transients, we would have no basis to object to the use of such a test if the agency requires data from the test to determine whether a product will meet its needs.

With regard to price, NTI's contention that Transtector has charged the Air Force an amount which exceeds the awardee's FSS price is incorrect. The record indicates that the confusion over price arose, in part, because in certain correspondence submitted to our Office, the agency misread the price list and quoted a price that was \$3,000 higher

than the listed price. In fact, Transtector's FSS price for the ACP5000 is \$29,500. In addition to the ACP5000, the Air Force purchased an extended warranty for \$2,802, for a total price of \$32,302. Transtector gave the agency a 13 percent discount on the total price, so the price actually charged the Air Force was \$28,102.74.

The protest is denied.


for James F. Hinchman
General Counsel